AD NUMBER
AD528780
CLASSIFICATION CHANGES
TO: unclassified
FROM: confidential
LIMITATION CHANGES
TO: Approved for public release, distribution unlimited
FROM: Distribution authorized to U.S. Gov't. agencies and their contractors; Administrative/Operational Use; 24 JAN 1974. Other requests shall be referred to Office of the Adjutant General, Washington, DC 20310.
AUTHORITY
OAG ltr, 13 Oct 1980; OAG ltr, 13 Oct 1980

AD 528780

CONFIDENTIAL

DEPARTMENT OF THE ARMY
OFFICE OF THE ADJUTANT GENERAL
WASHINGTON, D.C. 20310

HQDA Ltr 525-74-2

REPLY TO ATTENTION OF:

DAAG-PAP-A (M) (10 Jan 74) DAMO-ODU

24 January 1974

Expires 24 January 1975

AD528780

SUBJECT: Operational Report - Lessons Learned for Headquarters, 1st Aviation Brigade, Period Ending 31 Oct 72 (U)

SEE DISTRIBUTION

"Unauthorized Disclosure Subject to Criminal Sanctions"

1. The attached report is forwarded for review and evaluation in accordance with para 4b, AR 525-15.

2. The information contained in this report is provided to insure that lessons learned during current operations are used to the benefit of future operations and may be adapted for use in developing training material, as appropriate. This report should not be interpreted as the official view of the Department of the Army, or of any agency of the Department of the Army.

3. Information of actions initiated as a result of your evaluation should be forwarded to HQDA (DAMO-ODU) Washington, D.C. 20310, within 90 days of receipt of this letter.

BY ORDER OF THE SECRETARY OF THE ARMY:

VERNE L. F
Major Gen SA
The Adjutant neral

1 Incl
as

DISTRIBUTION:
Commander
US Army Training and Doctrine Command
US Army Materiel Command
Commandant
US Army War College
US Army Command and General Staff College
US Army Air Defense School
US Army Armor School
US Army Aviation School
(Continued on page 2)

Regraded unclassified when separated from classified inclosure.

CONFIDENTIAL

DISTRIBUTION (Continued)

US Army Combat Surveillance & Electronic Warfare School
US Army Field Artillery School
US Army Infantry School
US Army Intelligence School
US Army Transportation School

Copies furnished:
Office, Chief of Staff, US Army (DWSA)
Deputy Chiefs of Staff
Chief of Research and Development
Assistant Chiefs of Staff
Chief of Engineers
Commander in Chief, US Army Europe
Commander, III Corps
Commander, US Army Forces Southern Command
Commandant of the Marine Corps
Defense Documentation Center
Commander
US Army Land Warfare Laboratory
US Army Logistics Evaluation Agency
US Army Mobility Equipment Research & Development Center

AVBAGC

CONFIDENTIAL

SUBJECT: Operational Report-Lessons Learned for Headquarters, 1st Aviation Brigade, Period Ending 31 October 1972, RCS CSFOR-65 (R3) (U)

II. (C) Lessons Learned: Commanders Observation, Evaluation, and Recommendation

A. Personnel - None

B. Intelligence - None

C. Operations - None

1. Low Level Flight Operations in a Sophisticated Anti-Aircraft Environment.

a. Threat Reduction.

(1) OBSERVATION: Low level operations reduce the sophisticated anti-aircraft (AA) threat in northern MR I.

(2) EVALUATION: Because of the large number and variety of AA weapons being employed in northern MR I, flight at altitudes above 200' AGL by rotary wing aircraft has become extremely hazardous. Flight at or below 1500' AGL places the aircraft within effective small arms range. Low level flight (straight and level flight at or below 100' AGL) and nap-of-the-earth (NOE) flight significantly reduce the effectiveness of large caliber AA weapons. However, these low level techniques do not lessen the aircraft vulnerability to small arms fire except in that exposure time to aimed fire is reduced. If flight is conducted over a concentration of enemy troops, or if it is conducted in mountainous terrain where larger caliber AA weapons can be sighted down the valleys, the chance of taking hits is increased considerably.

(3) RECOMMENDATION: Aircraft should be flown in either a low level or a nap-of-the-earth posture at all times in high threat areas. Pilots should obtain all available intelligence concerning the area in which the flight is to be conducted so that known enemy positions and AA sites can be avoided.

(4) COMMAND ACTION: Units of the 1st Avn Bde utilize low level techniques in northern MR I; additionally, attempts to obtain intelligence concerning the enemy AA threat within the operational area are made prior to each mission.

b. Navigation.

(1) OBSERVATION: Navigation is extremely difficult at low level.

(2) EVALUATION: Navigation problems are caused by several factors: the lack of easily recognizable terrain features in parts of Vietnam, the age and accuracy of area maps, the speed at which aircraft are flying, the different perspective seen by the aviator at low level, and the fact that usually

DAMO-ODU
722015
Inclosure

CONFIDENTIAL

CLASSIFIED BY CG 1st AVN BDE, APO SF 96309
SUBJECT TO GENERAL DECLASSIFICATION
SCHEDULE OF EXECUTIVE ORDER 11652
AUTOMATICALLY DOWNGRADED AT TWO YEAR INTERVAL
DECLASSIFIED ON 31 DEC 1980

the aviators attention is divided between flying the aircraft, looking for the enemy, picking out a flight path, watching for other aircraft, and performing the mission assigned to him. In order to help alleviate this problem, a thorough map reconnaissance which includes selection of routes, key terrain analysis, plotting of boundaries, and designating checkpoints should be conducted. Another method which can be used for flights at low level is the time-distance-heading method (the aircraft starts from a known point following a predetermined azimuth and maintaining a specified airspeed for a certain time period). The main drawbacks to this method are that the pilot must watch his radio magnetic indicator or compass closely while flying at low level and the method cannot be effectively utilized during nap-of-the-earth flying.

(3) RECOMMENDATION: Pilots should conduct a thorough map reconnaissance before each mission and use the information gained from this reconnaissance together with their prior knowledge of the area to accomplish their missions. In addition, the time-distance-heading method should be used when possible.

(4) COMMAND ACTION: Units in the 1sc Avn Bde conduct a thorough map reconnaissance before each low level mission and utilize the time-distance-heading method when possible. Additionally, in some units, one individual (usually the Air Mission Commander) is given the specific duty of navigating for the entire team.

c. Command and Control

(1) OBSERVATION: Maintaining adequate command and control of reconnaissance operations and combat assaults at low level is extremely difficult.

(2) EVALUATION: Before the sophisticated AA threat in northern MR I forced U.S. Army helicopters into a low level flying posture, most reconnaissance missions and combat assault operations were conducted with the mission commander circling overhead at sufficient altitude to see all of his elements, keep them oriented in the objective area, and plot accurate coordinates of findings or provide vector assistance into the LZ (depending upon the mission). This luxury does not exist in the northern portion of MR I since the onset of the current NVA offensive. The command and control (C&C) helicopter is down on "the deck" with the rest of the aircraft.

(3) RECOMMENDATION:

(a) Several methods for employment of the C&C aircraft and the crew configuration within that aircraft have evolved since low level flying became the rule in northern MR I. In the 48th AHC, the C&C aircraft

was chalk 1 of the lift element during combat assaults (generally, air cavalry elements have previously reconnoitered a route into and out of the LZ and their scouts guided the lift flight into the proper areas). The aircraft commander of the C&C aircraft was also the mission commander of the combat assault.

(b) In reconnaissance operations there are two thoughts on the employment of the C&C aircraft. Two of the air cavalry troops (D/17 and F/8) keep their C&C aircraft orbiting over the last secure area before the "cav box" (air cavalry reconnaissance block, approximately 4x4 km or 3x6 km) is reached. Actual operational control is vested in the lead gunship pilot; the C&C is relegated to a coordination and recording facility with the secondary mission of conducting immediate rescue of downed aircrews from the air cavalry team (if this has not already been accomplished by one of the other aircraft). In both D/17 and F/8, one of the pilots in the C&C aircraft acted as mission coordinator during the actual reconnaissance phase of the operation and as mission commander during the planning phase.

(c) F/4 had a different method of employment for the C&C aircraft. They kept this aircraft orbit behind the gunships (staying over ground that has already been cleared by the scouts and gunships). The mission commander rode in the passenger compartment with the ARVN and US "backseats." From this position he directed the operation, navigated, copied spot reports, and performed the normal C&C coordination functions. The pilots flew the aircraft as directed by the mission commander. This method of employment left the pilots free to fly the aircraft and the mission commander free to devote his full attention to directing the operation.

(4) COMMAND ACTION: The techniques discussed above are presently being used by units of the 1st Avn Bde in northern MR I.

d. Gunship Cover

(1) OBSERVATION: Gunships have difficulty providing adequate cover for the scout aircraft during the conduct of a low level reconnaissance mission.

(2) EVALUATION: A major change which has come about with the advent of low level tactics in northern MR I has been that there is no longer a 360 degree gunship cap over scout aircraft conducting reconnaissance mission Having the guns at the same level as the scouts has greatly increased the problems of maintaining visual contact with the scouts and of target acquisiti (especially in hilly or mountainous terrain).

(3) RECOMMENDATION: Gunships should fly at low level behind the scouts over ground that the scouts have already cleared.

(4) COMMAND ACTION:

(a) The gunships fly in either a racetrack pattern (one aircraft inbound at all times) behind the scouts, or in a zig-zag pattern behind the scouts. In addition, the lead scout is also covered to some

degree by his wingman (F/4 and F/8). D/17 generally uses only one scout aircraft in the operational area in order to reduce control difficulties and cut down on overall blade hours.

(b) Target acquisition methods are basically the same as air cavalry units have been using all along: if possible, the scout will mark the target with smoke and verbally give the target location with reference to his position (using either the clock system or cardinal directions The gunships then engage the target by popping up to 100' - 150' AGL and engaging it with the appropriate weapon system. Because of the reduced target ranges, the reduced engagement time, and the rear cockpit configuration of the Cobra, it is exceedingly difficult to acquire and effectively engage a target at low level. No real solution has been found for this problem; generally, as pilot experience increases, his low level gunnery proficiency improves (however, current target acquisition methods are quite primitive and an improved system is definitely needed).

e. Reconnaissance mission formations.

(1) OBSERVATION: An efficient, controllable formation for the conduct of low level air cavalry reconnaissance missions is needed.

(2) EVALUATION: In order to effectively conduct an aerial reconnaissance operation, a formation must be utilized which is controllable, provides the gunships with good overwatch capability, and allows for the efficient collection and transmission of information.

(3) RECOMMENDATION: Units should evaluate their capabilities, requirements, and operating procedures and devise formations which enable them to accomplish their missions in the most efficient manner possible.

(4) COMMAND ACTION:

(a) Each 1st Avn Bde air cavalry troop has devised its own method for conducting reconnaissance operations in northern MR I. D/17 Cavalry varies the composition of its reconnaissance team to fit the mission and the enemy situation (for a route recon along the near area MSR, one gunship and one scout are used; for a reconnaissance into an area where contact is expected, the full team is used with extra aircraft on standby). Normal air cavalry team composition in D/17 is one OH-6A scout, two AH-1G gunships, and one UH-1H C&C. The method of reconnaissance used is to make a thorough map recon of the area to be checked, move to the vicinity of that locale and send the two gunships through it at high speed to determine whether or not the area is hot; while the gunships run through the "cav box" the C&C and the scout orbit over the closest available secure area.

AVBAGC
SUBJECT: Operational Report-Lessons Learned for Headquarters, 1st Aviation Brigade, Period Ending 31 October 1972, RCS CSFOR-65 (R3) (U)

(b) If the gunships take no fire on this first run-through, a second pass is made at a slightly slower speed using the scout aircraft along with two gunships. If no fire is taken on this pass, a slow, methodical check is made of the area by the two gunships and the scout. The gunships maintain an S-type, a zig-zag, or a racetrack pattern behind the scout during the final phase of the reconnaissance. Throughout all phases of the reconnaissance, the C&C orbits over the closest secure area to the "cav box."

(c) In F/8 Cavalry, the reconnaissance team consists of two OH-6A scouts, two AH-1G gunships, and one UH-1H C&C. The C&C does not actively participate in the actual conduct of the mission, but orbits over the closest secure area to the "cav box." The gunships run a zig-zag, S-type, or a racetrack pattern behind the scouts; the number two scout assists in covering the lead scout. Additional gunships may be augmented into the team to "prep" areas where contact is expected prior to the entry of the scouts (these gunships then return to the forward staging area and rearm while the remainder of the team continues the mission).

(d) F/4 Cavalry puts its entire visual reconnaissance (VR) team into the "cav box." The team consists of two OH-6A scouts, two AH-1G gunships, and one UH-1H C&C. The lead scout searches the area, his wing man covers him and also searches, the two gunships run a racetrack pattern (one aircraft always inbound) behind the scouts over ground that the scouts have cleared. The C&C aircraft orbits behind the gunships in a separate orbit, also remaining over ground that has been cleared by the scouts (and, by this time, the gunships). These techniques are being utilized with good results by air cavalry troops operating at low level in northern MR I.

f. Lack of Intelligence Information

(1) OBSERVATION: Not enough specific area intelligence is made available to air crews before missions are conducted.

(2) EVALUATION:

(a) Because of the vulnerability of the helicopter to enemy anti-aircraft efforts (small arms, automatic weapons, and RPG's at low altitudes; AAA and heat seeking missiles at higher altitude), any mission flown in a high threat area should be based on the most timely and accurate intelligence available. Many times this intelligence is not passed to the aircrews concerned because the supported unit either neglects to gather the information, fails to pass the information, or purposely ignores the information. The problem stems partly from the fact that the U. S. Army aircraft are normally assigned to the U. S. advisor instead of to the supported unit itself. If the advisor does not talk to his counterpart, or if he has promised his counterpart that the mission will be flown, then there is a tendency toward either complete ignorance of the situation in the operational area, or else the enemy threat there is minimized.

AVBAGC
SUBJECT: Operation Report-Lessons Learned for Headquarters, 1st Aviation Brigade, Period Ending 31 October 1972, RCS CSFOR-65 (R3) (U)

(b) Operating without timely, accurate intelligence on enemy troop locations, capabilities, and AA positions in a conventional environment is almost suicidal; this intelligence is a must if an acceptable survivability rate in this environment is to be maintained.

(3) RECOMMENDATION: Air Mission Commanders should talk to as many people as possible concerning their particular area of operations; this includes U. S. advisors, ARVN and VNMC commanders and staff officers, and other pilots who have flown in the area. In addition, each unit should maintain a "shot at" map and a plot on all known enemy AA positions and enemy unit locations; this information should be updated whenever new data is received. In cases where information is purposely withheld or is consistently erroneous, an unsatisfactory mission report should be sent in and a NOTAM posted in the unit operations building stating that any information given by this particular source should be checked as thoroughly as possible.

(4) COMMAND ACTION: Air Mission Commanders in the units of the 1st Avn Bde are making every effort to obtain the most accurate intelligence available about their operational areas prior to each mission.

g. Low Level Flight Training

(1) OBSERVATION: Pilots need more low level flight training before they are committed to low level operations.

(2) EVALUATION: In the low level environment, things happen much more quickly than they do at altitude. The pilot has less time to react to other aircraft in the area, less time to react to an emergency in his own aircraft, and more difficulty in navigating. In addition, he must also try to keep up a good instrument crosscheck while picking out a flight path, this often within inches of the tree tops. This type of flying is extremely fatiguing and it requires a high degree of judgment and skill on the part of the pilot.

(3) RECOMMENDATION: In order to increase pilot proficiency and confidence in the low level flight environment, additional training in low level navigation, flight procedures, and emergency procedures should be given all pilots (both in flight school and at the unit level if the unit anticipates the possibility of low level operations at some future date). In addition, specialized training in low level gunnery and low level command and control techniques should be given to selected individuals (gunship pilots, unit Air Mission Commanders); this training could be conducted at both the formal school level and at the unit level.

(4) COMMAND ACTION: Low level autorotations have been added to the 90 day standardization check ride by units of the 1st Avn Bde in MR I.

In addition, new pilots are given comprehensive familiarization rides within the unit until they know the operational areas and have been advised of the low level flying techniques utilized by the unit aircraft commanders.

h. Low Level Communications.

(1) OBSERVATION: Communications between aircraft operating at low altitude and their base stations/flight following agencies is difficult.

(2) EVALUATION: Aircraft operating at low level north of the Hai Van Pass cannot communicate with the flight following agency in DaNang or with their unit operations section in Marble Mountain becuase of the mountains which separate the base areas from the northern area of operations. Since a large number of aircraft are flying in high threat areas north of the Hai Van Pass daily, some means of flight following is required.

(3) RECOMMENDATION: Establish a flight following agency north of the Hai Van Pass.

(4) COMMAND ACTION: The 1st Avn Bde has representatives in the FRAC forward TOC in the Hue Citadel. One of the additional duties of this forward element is to act as a flight following agency for 11th CAG aircraft operating in northern MR I.

i. Anti-tank Missile Employment

(1) OBSERVATION: Effective employment of the SS-11 missile on the UH-1M helicopter is extremely difficult at low level.

(2) EVALUATION: Because of the high AA threat in northern MR I, the SS-11 aircraft have had to fly and fight at low level. The main problem experienced by the SS-11 gunners at low level has been target acquisition at sufficient range to effectively employ the missile.

(3) RECOMMENDATION: The SS-11 missile should be employed with an air cavalry team; the gunships provide escort, the scouts find and (if possible) mark the target, and the C&C provides vector assistance. This method of operations provides protection for the aircraft and target acquisition assistance for the SS-11 gunners. However, with the present system and the loss of long range observation capability which is inherent in low-level flight, target acquisition still remains a significant problem.

(4) COMMAND ACTION: The UH-1M aircraft equipped with the SS-11 system is employed as part of an air cavalry team in the 11th CAG. It is normally kept on stand-by at a staging area until it is needed at which time the air cavalry team rendezvous with the aircraft and takes it into the target.

AVBAGC
SUBJECT: Operational Report-Lessons Learned for Headquarters, 1st Aviation Brigade, Period Ending 31 October 1972, RCS CSFOR-65 (R3) (U)

j. Low Level CH-47 Employment

(1) OBSERVATION: The CH-47 is extremely vulnerable in a sophisticated AA environment.

(2) EVALUATION: The CH-47 is an especially vulnerable aircraft to virtually any type of hostile fire because of its size and its infra-red signature. The resupply of large amounts of bulk supplies (i.e. artillery ammunition, construction materials, POL, etc.) can be done very expeditiously using this aircraft; in fact, it is the preferred method of resupply for armor and artillery units. This has necessitated utilizing the Chinook in a front line resupply role.

(3) RECOMMENDATION:

(a) The primary means for reducing the CH-47's vulnerability is to keep it in the high threat areas for the shortest possible time. The most vulnerable time for a CH-47 is when it is on the ground in the LZ. In order to reduce the time spent in the landing zone to an absolute minimum; the external cargo configuration should be used whenever feasible. This is not always possible because ground units do not have sufficient slings, nets, and other air delivery rigging to allow CH-47's supporting them to use the external cargo configuration.

(b) Area intelligence is also very important in CH-47 operations. Because of the fact that the Chinook (with external load) flies higher than most other aircraft in the low level flight environment, extreme caution must be exercised in selecting routes of flight and landing zones. In addition, gunship cover should be provided whenever a CH-47 will be working in a high threat area.

(4) COMMAND ACTION:

(a) It has been requested that units in MR I utilizing CH-47 aircraft rig as much of their cargo as possible for external hauling. In addition, gunships normally provide cover for CH-47 sorties into high threat areas.

(b) The method used by the gunships to cover the CH-47 is to leave the CH-47 orbiting over a secure area while the gunship team locates the LZ and determines security of the routes in and out.

(c) Once this had been accomplished, the CH-47 is escorted into the LZ (one gunship flies directly behind the CH-47 providing close cover and vector assistance, the other flies about 500 meters back at the same altitude and zig-zags from side to side covering both flanks). When the Chinook enters the LZ, the gunships either begin a low orbit around

the LZ in a racetrack pattern or they orbit over any known indirect fire weapon sites in the vicinity of the LZ. The technique used depends upon the amount of time that the CH-47 is expected to spend in the LZ and the enemy situation in the area surrounding the LZ. As the Chinook exits the LZ, the gunships fall in behind and below to cover it on the way out.

2. Aircraft Operations

a. Scout Reconnaissance

(1) OBSERVATION: Aircraft conducting reconnaissance missions in blocks which are well forward of friendly lines have received little or no fire going out to the block but receive intense fire coming back.

(2) EVALUATION: Initially, when reconnaissance blocks were assigned well forward of friendly positions, air cavalry teams would receive intense fire upon crossing the friendly FEBA; generally, at that time the mission would be aborted. Then the enemy began using the tactic of hiding when aircraft crossed the FEBA enroute to a reconnaissance block and staying hidden until the aircraft began their reconnaissance (aircraft generally move at a high speed in a straight line until they arrive at their assigned block, then go into the slow reconnaissance posture). Once the scouts started to look, the enemy would begin firing all of his weapons into the air throughout the area (as if on command) and the fire was sustained until the aircraft were either shot down or back across friendly lines.

(3) RECOMMENDATION: Reconnaissance missions forward of friendly lines should be carefully considered before they are assigned. If, after due consideration, this mission is assigned, air cavalry reconnaissance teams should reconnoiter the route out to the block as thoroughly as they reconnoiter the block itself in order to avoid being caught behind enemy lines.

(4) COMMAND ACTION: Air cavalry elements in the 1st Avn Bde use reconnaissance movement techniques whenever possible when working forward of friendly lines or in an unsecure or doubtful area.

b. Downed Aircrew Recovery

(1) OBSERVATION: Because of the conventional array of forces in northern MR I and in portions of MR II and III, the need occasionally arises to conduct downed aircrew recovery from behind enemy lines.

(2) EVALUATION: The nature of operations in many areas of Vietnam is such that an aircraft can move from an area which is relatively secure to one which is extremely hazardous in a matter of seconds. Because

of the high enemy troop density on the FEBA (his tactic is to "hug" the friendly FEBA whenever possible to negate the effects of B-52 strikes), an aircraft can go down within 200 meters of friendly troops and be in the enemy hands.

(3) RECOMMENDATION: Immediate rescue by other aircraft in the area is generally the only hope for the downed aircrew in this situation. However, each aircrew should be prepared to use escape and evasion techniques if the area is too "hot" in which to land another aircraft. Aircrews should carry survival gear (including the survival radio) and personal weapon.

(4) COMMAND ACTION: In the air cavalry troops, both the OH-6A and the UH-1H are used as recovery vehicles; the other type units (AHC, CAC) generally run a "chase" ship (UH-1H) on missions in high threat areas. The technique is for the designated rescue aircraft to attempt to land near the downed aircraft immediately; if hostile fire or other factors prohibit immediate rescue, then a planned attempt is made as soon thereafter as possible. If available, USAF forces are also utilized in the second rescue effort. In addition, each aircrew carries survival gear and personal weapons in case escape and evasion is the only alternative.

c. Aircrew Recovery Force.

(1) OBSERVATION: A quick reaction force in close proximity to a working air cavalry team is needed in case an aircraft goes down in enemy territory.

(2) EVALUATION: Normally, a two or three UH-1H element should be kept on stand-by (if possible) in order to expedite the securing and/or rescue of downed aircrews.

(3) RECOMMENDATION: That air cavalry troops maintain a quick reaction force on a strip alert as close to their working VR team as possible.

(4) COMMAND ACTION: Whenever possible air cavalry units in the 1st Avn Bde maintain a stand-by force to assist in the event that an aircraft is downed.

d. Munition Equipment.

(1) OBSERVATION: The employment of certain types of munitions in close proximity to friendlies must be closely monitored.

(2) EVALUATION: Certain ammunition creates a hazard when it is fired in close proximity to friendly troops. Shell casings from the 20mm cannon are large enough to seriously injure an individual if he is struck by one falling from an aircraft. The 40mm grenade round is also hazardous at low level when fired near friendlies because the gunner is never quite sure where his first rounds are going to impact (there is also the possibility

AVBAGC
SUBJECT: Operational Report-Lessons Learned for Headquarters, 1st Aviation Brigade, Period Ending 31 October 1972, RCS CSFOR-65 (R3) (U)

of flying through one's own fragments when this round is fired at low level). 2.75" rockets also have been some drawbacks when fired in close proximity to friendlies; fleshettes are a hazard because of their large area coverage, 17 lb. HE warheads have a tendency to "drop" during flight toward the target and all rockets tend to weathervane into the strongest relative wind in the vicinity of the aircraft.

(3) RECOMMENDATION: Extreme caution should be exercised when firing any air-delivered ordnance in close proximity to friendlies.

(4) COMMAND ACTION: Gunship crews in the 1st Avn Bde have been instructed to ascertain friendly locations and obtain clearance to fire from ground elements before expending ordnance.

e. Surveillance and Interdiction Operation in "Rocket Belt" Areas

(1) OBSERVATION: The need exists to conduct surveillance and interdicting operations in the mortar and rocket belts around the Da Nang/Marble Mountain, Pleiku and Bien Hoa area.

(2) EVALUATION: The enemy's use of attacks by fire against the US installations in the Da Nang/Marble Mountain, Pleiku and Bien Hoa areas have made it imperative that some sort of surveillance be conducted in the local rocket/mortar belt and some means of interdiction be devised.

(3) RECOMMENDATION: That aircraft be utilized to conduct surveillance and interdiction operations in the Da Nang/Marble Mountain, Pleiku and Bien Hoa rocket belts.

(4) COMMAND ACTION:

(a) The USAF conducts this surveillance/interdiction mission with an aircraft called "Stinger" (a C-119armed with 20mm cannon and special IR equipment) The Army provides a Nighthawk team consisting of two UH-1H aircraft for this mission. The Nighthawk and Stinger aircraft are in radio contact and, when the need arises, they work together.

(b) The Night hawk team works using the "high bird-low bird" concept. The "high bird" is a flare ship which circles over the search area at 2500-3000' and provides illumination as directed by the aircraft commander of the low bird. The "low bird" flies blacked out except when it is using the Xenon searchlight on its right side or the modified C-130 landing light on its left side.

(c) For armament, the aircraft has a .50 caliber machine gun on the left side and a minigun on the right side. The "low bird" flies at a low level and searches out possible rocket/mortar sites or indications of enemy activity.

(d) Responsibility for Nighthawk alternates among 1st Avn Bde units in each area. The missions are run at varying times and areas and for different lengths of time each night. Generally, the amount of time flown is in direct proportion to the amount of the rocket/mortar threat (based on current intelligence estimates

AVBAGC
SUBJECT: Operational report-Lessons Learned for Headquarters, 1st Aviation Brigade, Period Ending 31 October 1972, RCS CSFOR-65 (R3) (U)

f. Air Cavalry Team-Forward Air Controller Coordination

(1) OBSERVATION: A Forward Air Controller (FAC) working in conjuction with an air cavalry team is an extremely effective method of operation.

(2) EVALUATION: Having a FAC in contact with an air cavalry element and flying overhead at 8,000' - 10,000' offers several advantages. Many times, the FAC can put immediate TACAIR on a target found by the VR team. In addition, the FAC can assist in target acquisition (in some cases) and in navigation.

(3) RECOMMENDATION: That coordination be effected between US Army and USAF elements to work an air cavalry team in conjuction with a FAC whenever possible.

(4) COMMAND ACTION: No formal arrangement has been worked out between the US Army and the USAF in this particular endeavor; however, FAC and air cavalry units have worked together in the past on an ad hoc basis with varying degrees of success.

g. Landing Zone Mobbing Problems

(1) OBSERVATION: There have been several instances of US aircraft being mobbed in the LZ by ARVN/VNMC forces trying to get out of the battle area.

(2) EVALUATION: Because of the obvious lack of control in the LZ when an incident of this nature occurs, a very serious threat exists to the lives of the helicopter crews and also to the aircraft involved. Several aircraft have crashed and at least one US helicopter crewman has been killed in connection with these mobbing incidents. Generally, when soldiers are so panic-stricken that they will fight among themselves and attempt to pull US crewmen off an aircraft, there is very little that can be done by anyone to control them.

(3) RECOMMENDATION: That pilots on resupply missions who feel that they will be mobbed if they land in the LZ, come to a high hover and have their crews kick the supplies out of the aircraft. If a pilot on a medevac mission feels that he will be mobbed, he should abort the mission until he receives a guarantee that the LZ will be controlled and then continue the mission only at his discretion.

(4) COMMAND ACTION: Pilots of the 1st Avn Bde have been instructed not to go into LZ's where they feel that there is a good possibility of being mobbed. Close coordination between pilots, ground commanders, and advisors is necessary to alleviate this problem.

h. Gun Cover for Front-line Operations

(1) OBSERVATION: The need exists to provide adequate gunship cover to UH-1H aircraft engaged in front line medevac/resupply missions.

(2) EVALUATION: The sophisticated anti-aircraft threat in portions of Vietnam has necessitated the increased use of gunship cover for UH-1H aircraft engaged in resupply/medevac operations.

AVBAGC
SUBJECT: Operational Report-Lessons Learned for Headquarters, 1st Aviation Brigade, Period Ending 31 October 1972, RCS CSFOR-65 (R3) (U)

(3) RECOMMENDATION: The normal package for this type of mission should be two AH-1G gunships and two UH-1H helicopters (one to perform the mission and one to act as chase). The UH-1H's should normally orbit over a secure area while the gunships locate and reconnoiter the LZ. The gunships then return to the UH-1H aircraft and vector/escort them into the LZ. While the UH-1H's are in the LZ, the gunships set up a racetrack pattern overhead; as the UH-1H's leave the LZ, the gunships fall in behind and escort them out to home base.

(4) COMMAND ACTION: Units of the 1st Avn Bde use the procedure described above whenever possible during performance of a front-line resupply or medevac mission.

1. Inefficient Air Asset Utilization

(1) OBSERVATION: Ground units do not generally utilize air assets as efficiently as they should.

(2) EVALUATION:

(a) In many instances, aviation elements throughout Vietnam are not being employed in the role that they were designed to fill; also, aircraft are not being utilized in a manner which is commensurate with their capabilities and limitations. For example, if the requirement for individual aircraft is such that it cannot be met by the assault helicopter company and the corps aviation company, air cavalry assets are used. This use of air cavalry assets detracts from the cavalry's ability to perform its basic mission. It should be added at this point that many times these committed aircraft go to their assigned staging area, land, and sit with four to six other US and VNAF aircraft for eight hours, possibly flying one or two short missions, after which they return to base. In addition, many commanders/advisors feel that air cavalry is also aerial field artillery and they want to use it in close support of troops in contact rather than in the reconnaissance and security role for which it was designed. When aircraft are lost or damaged on a mission that they should not have been involved with in the first place, it makes accomplishment of the unit's basic mission more difficult than it had been previously.

(b) Another problem is that units in forward areas are very hesitant about using smoke to identify their positions for resupply/medevac. When they "pop smoke", they sometimes draw enemy fire. This makes coordination with ground forces extremely difficult. They put out panels and use mirrors, but these devices are difficult to spot at 30' AGL and 95 knots IAS.

(c) A final problem area is that US air assets seem to be added-on to the ARVN units' ground tactical plan rather than integrated into it. This stems partly from the fact that the US aircraft are assigned to advisory elements instead of to the supported unit. The unit makes its plans for the next day and then the advisory adds his US air assets to the plans (whether or not these assets are really needed, in some cases). An example of this improper aircraft utilization is sending an air cavalry unit to reconnoiter forward of the friendly lines when the friendly troops at the assigned VR

AVBAGC
SUBJECT: Operational Report-Lessons Learned for Headquarters, 1st Aviation Brigade, Period Ending 31 October 1972, RCS CSFOR-65 (R3) (U)

location are in contact and have been for some time; since the mission of a reconnaissance is to find the enemy, and since the friendly troops in the location are already in contact, this is not a valid mission for air cavalry assets. The thought behind this utilization of aircraft whether or not they are needed seems to be that if aircraft are not requested every day, they will not be available when they are really needed. The result is extremely haphazard air-utilization, a large number of wasted blade hours, and a lot of additional expense.

(3) RECOMMENDATION: The only viable solution is for a constant review to be conducted regarding aircraft requirements and utilization policies. Decisions must be made concerning whether the requirements of the mission are such that the use of a unit in other than its primary functions or the fragmenting of individual aircraft out of a tactical unit is warranted. Additional coordination between representatives of ground and aviation units would also alleviate many problems. Finally, an aviation officer assigned to each division advisory team to coordinate the use of US aircraft or unit liaison officers from the supporting aviation units would also be of assistance.

(4) COMMAND ACTION: 1st Avn Bde units currently send unsatisfactory mission reports to their Regional Assistance Command when aircraft are not properly utilized; in addition, coordination visits are conducted frequently by members of the 1st Avn Bde to supported units to find out what problems exist and to attempt to resolve those problems. Furthermore, the 1st Avn Bde provides liaison officers to supported units when the situation so dictates.

D. Organization - NONE.

E. Training - NONE.

F. Logistics

1. Parts and Equipment

a. Infrared Suppression Kits and Decoy Devices.

(1) OBSERVATION: Information and guidance pertaining to the IR suppression kit installation resulted in numerous problems.

(2) EVALUATION: The introduction of heat seeking missiles by the NVA and Viet Cong presented a tremendous threat to the USARV aircraft fleet. Upon detection of threat, the Commanding General, 1st Aviation Brigade requested assistance from the US Army Aviation Systems Command (AVSCOM) in St. Louis, Missouri. The response to this request was superb, and within one month, IR suppression kits were introduced in RVN to counter the enemy threat. Suppression kits were developed and shipped to RVN for all UH-1, AH-1G, OH6A, and OH-58 helicopters.. The ALE-29 flare dispersing decoy system was developed and shipped to RVN for the CH-47 helicopter. AVSCOM provided expert field service technical assistance for the installation of all kits and devices. Some problem areas existed with the systems, however, the responsiveness by AVSCOM to rectify the problem areas was tremendous. Control and distribution of all

AVBAGC
SUBJECT: Operational Report-Lessons Learned for Headquarters, 1st Aviation Brigade, Period Ending 31 Octob.r 1972, RCS CSFOR-65 (R3) (U)

IR kits and decoy devices was handled by the ACofS, G-4, 1st Aviation Brigade. Several problems were encountered in the area of accountability and control in the shipment of kits from CONUS to RVN. Shipping information received was often late and inaccurate. Several shipments were inadequately marked externally, presenting problems of identification and resulting in much lost time in further shipment of the kits to operational units. Several IRCM related items were shipped via commercial air and were improperly marked, resulting in their being detained by Vietnamese Customs personnel for excessive periods of time before release. The entire IRCM program has been completed for all UH-1, AH-1G, OH-6A, OH-58, and CH-47 aircraft in USARV. This program has been extremely successful, however, it could have been accomplished in a much shorter time frame if the shipping and transportation data was better organized and more expeditiously furnished to this command.

(3) RECOMMENDATIONS:

(a) That additional research be conducted to provide a more durable material for all IR suppression scoops and fairings.

(b) That repair kits be identified by FSN and contain sufficient repair material to meet any anticipated repair requirement for the kit.

(c) That a suppression kit be developed for an OH-6A that will require far less time for installation than the present model. Less than eight hours in a combat zone would be acceptable.

(d) That all aircraft shipped to a combat zone have IR suppression kits installed before shipment.

(e) That all future Army production aircraft have IR suppressive capabilities built in as an integral part of the airframe.

(f) That a MWO be published for the UH-1, AH-1G, and CH-47 suppression/decoy devices to permit continuity in historical records and to provide a basis for better control of the kits actually installed.

(4) COMMAND ACTION:

(a) The 1st Aviation Brigade made an intensive effort to expeditiously ship all kits to the operational units as soon as possible after their arrival in RVN.

(b) Numerous technical assistance visits were made to operational units during the installation program to assist in problem areas and to advise AVSCOM of difficulties encountered.

(c) Documentation of all kit installations by aircraft serial number was conducted by the G-4, 1st Aviation Brigade.

(d) Numerous phone calls and messages were dispatched between USARV and AVSCOM to insure continuity of procedure and nondistortion of the installation program.

AVBAGC
SUBJECT: Operational Report-Lessons Learned for Headquarters, 1st Aviation Brigade, Period Ending 31 October 1972, RCS CSFOR-65 (R3) (U)

b. IR Suppression Kit Covers.

(1) OBSERVATION: Covers issued with the IR shields on UH-1H and AH-1G helicopters melt and fall into the exhaust portion of the engine if they are replaced too quickly after flight.

(2) EVALUATION: The covers issued with the IR shields are made with a thread which melts if it is replaced too quickly after flight. The covers must be installed after flight because if it rains and the exhaust stack is left uncovered, the engine will be filled with water..

(3) RECOMMENDATION: The present solution is to wait until the engine has cooled sufficiently to cover the exhaust without causing the cover to melt. Another solution would be to make the covers out of a more heat resistant material.

(4) COMMAND ACTION: Aircrews have been instructed to delay covering the exhausts on their aircraft until sufficient time has elapsed for the engine to cool. In addition, several unit maintenance officers have submitted EIR's on these covers.

c. Aircraft Salvage Operations

(1) OBSERVATION: Many usable parts are located on aircraft which have been shot down and have been determined to be combat losses.

(2) EVALUATION: Many usable components are on aircraft downed earlier in the offensive and which are currently on terrain that is being recaptured by friendly units.

(3) RECOMMENDATION: That some effort be made to recover these part and return them to the supply system.

(4) COMMAND ACTION: 1st Aviation Brigade Group units currently have a recovery team (which includes one UH-1H with normal crew, two riggers, three EOD personnel, and one ground controller) who go out to the crashed aircraft after it has been determined that there are enough salvageable parts on the aircraft to make recovery worthwhile. An air cavalry team also goes along to cover the operation. After the aircraft has been rigged, a CH-47 hauls it to the Direct Support Unit where it is stripped and the salvage parts are returned to the supply system.

d. Transfer of CH-47A Aircraft to VNAF

(1) OBSERVATION: Aircraft transfer of CH-47A helicopters to the VNAF under the Improvement and Modernization (I&M) Program was plagued by numerous problems.

(2) EVALUATION: The 1st Aviation Brigade was tasked by Department of the Army to receive, process, and issue to VNAF, 23 CH-47A helicopters under

AVBAGC
SUBJECT: Operational Report-Lessons Learned for Headquarters, 1st Aviation Brigade, Period Ending 31 October 1972, RCS CSFOR-65 (R3) (U)

the VNAF I&M Program. Several aircraft were received with avionics and engine configurations that did not meet the transfer criteria. During the assembly process, severe maintenance difficulties were encountered with the Integral Spar Inspection System (ISIS) rotor blades. Sufficient Brigade assets were not available to fulfill the transfer requirement for CH-47A aircraft under the program. Twenty-three aircraft were shipped from New Cumberland Army Depot and arrived in Saigon between 1 and 18 October 1972, for the 1st Avn Bde to assemble and to issue to VNAF. Of the 23 aircraft, 10 required the replacement of the T55L7/L7B engines and 15 required replacement of the ARC-54 FM radio due to the requirement for the T55L7C engines and the ARC-131 FM radios to meet transfer criteria. Permission was obtained from AVSCOM to remove the L7C engines and the ARC-131 radios from retrograde CH-47C aircraft and to exchange them for the T55L7/L7B engines and ARC-54 radios in the CH-47A's. AVSCOM advised that the first twelve aircraft would probably require modifications to meet the transfer criteria since sufficient time was not available to accomplish this work at New Cumberland prior to scheduled shipment dates. This additional burden further delayed the transfer timetable. The Maintenance Operational Check and Hover tests of the first aircraft resulted in severe maintenance difficulties with the newly modified ISIS rotor blades. After thirty minutes of operation, four of the six blades on the first aircraft had lost varying amounts of the aerodynamic filler material from the nose cap to spar and the blade pocket to spar bounding areas. One blade had deteriorated to the extent that CONUS retrograde will be required for factory repair. EIR with pictures were submitted and AVSCOM was notified of the difficulty. AVSCOM advised that the Boeing Vertol Field Representative would receive repair material and instructions for in-country repair of the blades. Two other aircraft were operationally checked and the same difficulty was experienced with both aircraft. Blades that were repaired by the field representative were again operationally tested and the repaired areas were found to be satisfactory but the filler material continued to be lost from the areas of the blades that appeared to be satisfactory on the previous tests. Of the first 18 blades tested, 13 have proven to be unsatisfactory. AVSCOM has been requested to send a team to repair blades on-site or to grant permission for the return of all ISIS blades to CONUS for rework. AVSCOM has also been requested to expedite the shipment of 9 T55L7C engines to cover the difference between the total required and the number of serviceable engines recovered from the retrograde aircraft.

(3) RECOMMENDATIONS:

(a) That for future operations of this nature, aircraft be prepared to meet transfer criteria prior to their departure from CONUS.

(b) That a detailed after-action report outlining all problem areas and the impact of this unprogrammed project upon this command's capabilities be prepared upon completion of the project and copies furnished to Department of the Army, AVSCOM, and all other applicable agencies.

AVBAGC
SUBJECT: Operational Report-Lessons Learned for Headquarters, 1st Aviation Brigade, Period Ending 31 October 1972, RCS CSFOR-65 (R3) (U)

(4) COMMAND ACTION: This project has been assigned a high priority and has consistently received command emphasis. This Headquarters is coordinating directly with AVSCOM to resolve the problem areas in order to expedite completion of the project.

e. Transfer of T55L7C Engines

(1) OBSERVATION: Problem areas encountered by the command with the engine transfer ISSA, 4066-1 were numerous.

(2) EVALUATION:

(a) USAF and USARV Inter-Service Support Agreement 4066-1 initiated a transfer plan of 15 T55L7C engines to the VNAF for spares. Subsequent negotiations at various staff levels including AVSCOM in St. Louis and the Air Force Advisory Group, Saigon, increased this quantity to 24. The 24 engines were to be available in monthly increments of 3 to 7 engines per month.

(b) During the month of October 1972, three engines were to be delivered to VNAF and pending the issue of these engines, an AVSCOM message arrived concurring with the additional transfer of 24 T55L7C engines. The 1st Avn Bde had not received any previous data on these 24 engines nor had any plans been formulated to permit supply of these 24 additional engines.

(c) There was a communication gap between CONUS (AVSCOM) and the 1st Avn Bde concerning the programming of these 24 additional engines. No prior coordination was effected to permit the 1st Avn Bde to react to this requirement.

(d) Additionally, the arrival of 23 CH-47A aircraft from CONUS required, without notice prior to arrival, the change-out of T55L7B engines to T55L7C powerplants. This further depleted available T55L7C engines in RVN.

(e) USARV transferred 15 CH-47A aircraft to VNAF. Eight T55L7B engines on these aircraft required change-out for T55L7C's. The above requirements exhausted all USARV T55L7C engine assets.

(3) RECOMMENDATION: The above problems could have been precluded if the AIMI managers at AVSCOM would have advised USARV of the forthcoming plan for the 24 additional T55L7C engines. Secondly, those offices at all levels which negotiated the transfer of the 23 CH-47A aircraft to VNAF from CONUS neglected to consider the VNAF powerplant requirements.

(4) COMMAND ACTION: The 1st Aviation Brigade honored the ISSA by providing VNAF with engines from all in-country assets and requests from CONUS.

f. Test and Measurement Diagnostic Equipment Calibration

(1) OBSERVATION: With the continuing personnel reductions, calibration facilities were frequently eliminated, causing many difficulties.

AVBAGC
SUBJECT: Operational Report-Lessons Learned for Headquarters, 1st Aviation Brigade, Period Ending 31 October 1972, RCS CSFOR-65 (R3) (U)

(2) EVALUATION: The calibration of test and measurement equipment utilized in the performance of maintenance on Army aircraft and related systems, has presented many problems to USARV units. The drawdown of US Forces resulted in the loss of much of the available military calibration capability and an increased reliance on civilian contracted calibration sites. Calibration, like several other quality assurance programs, did not receive sufficient emphasis and resulted in numerous test and measurement items that were overdue calibration, being utilized in performance of maintenance. Many units were not aware of the calibration facilities available for their use nor of the procedures required to have items calibrated.

(3) RECOMMENDATIONS:

(a) That continued command emphasis be placed on proper calibration procedures.

(b) That all MACV actions pertaining to the capabilities, location, movement, or change of policy in the operation of civilian contracted calibration sites, be closely coordinated with the Quality Assurance Branch, Aircraft Maintenance Division, ACofS, G-4, 1st Aviation Brigade.

(c) That the calibration program be included as a key item of interest on all aircraft maintenance staff visits and inspections.

(4) COMMAND ACTION: In an effort to interject new life into the calibration program and to insure that all units were following the prescribed calibration procedures, the 1st Aviation Brigade's G-4, Quality Assurance Branch took the following actions:

(a) A detailed letter of instruction for calibration services was provided to each USARV unit.

(b) Each calibration site under civilian contract was visited by personnel from the Quality Assurance Branch, at which time the capabilities of the site were analyzed and the aircraft maintenance calibration requirements were discussed.

(c) The 1st Aviation Brigade Aircraft Maintenance Assistance and Liaison Team visited each USARV unit, inspecting the unit's calibration program in detail, and providing assistance and guidance for the establishment of a sound calibration program.

(d) Close coordination was made with the MACV calibration officer to insure the continued availability of civilian contracted calibration sites in each military region.

g. MWO Configuration Control

(1) OBSERVATION: Several problem areas were observed with Modification Work Orders (MWO) and the Configuration Control Program.

AVBAGC
SUBJECT: Operational Report-Lessons Learned for Headquarters, 1st Aviation Brigade, Period Ending 31 October 1972, RCS CSFOR-65 (R3) (U)

(2) EVALUATION:

(a) The maintenance of valid MWO configuration control data on USARV has been an extremely difficult task. Due to mission requirements and other priority functions the application of normal MWO's on aircraft in USARV was looked upon by most units as something that should be done, but not now! This attitude, coupled with little or no command emphasis, resulted in noncompliance of numerous normal MWO's and a loss of accountability of many others. The aircraft retrograde requirements included the application of all MWO's or retrograde of the MWO kits with the aircraft. These requirements, for the most part, were overlooked.

(b) Very little stability existed in the USARV fleet for several years. Numerous aircraft transfers took place on a daily basis and the turnover of aircraft was high for all units. This situation presented problems not only in the continuity of log books and historical records, but also in the issuance and maintenance of accountability of MWO kits which were requisitioned and subsequently issued to one of the owning units of the aircraft. Some kits were issued for aircraft which were no longer in that unit's fleet due to attrition or transfer. The loss of accountability of an unknown number of kits resulted from this situation.

(c) Historical record entries were found to be inaccurate for nearly all aircraft. Many MWO's which were applied, were not reflected as such in the historical records. Additionally, many MWO's recorded as being applied in the historical records, had, in actuality, never been applied.

(3) RECOMMENDATIONS:

(a) That continued command emphasis be placed on MWO accountability and compliance.

(b) That the owning unit of aircraft requiring MWO applications be responsible for the ordering of all kits which can be installed organically or by their supporting DS/GS unit. Documenting the issuance of the MWO kits to specific units for specific aircraft will constitute responsibility for accountability of all kits regardless of the disposition of the aircraft.

(4) COMMAND ACTION: In an effort to purify the master MWO configuration control records, and to insure the application and compliance of all applicable MWO's for the USARV fleet, the following actions were taken:

(a) All echelons of command were directed to place emphasis on the compliance of outstanding MWO's against their aircraft.

(b) The Quality Assurance Branch, ACofS, G-4, Aircraft Maintenance Division, 1st Avn Bde, assumed total responsibility for MWO configuration control, requisition review, application, and accountability, for all aircraft in the USARV fleet.

AVBAGC
SUBJECT: Operational Report-Lessons Learned for Headquarters, 1st Aviation Brigade, Period Ending 31 October 1972, RCS CSFOR-65 (R3) (U)

(c) A computer program was devised to produce printout sheets for all applicable MWO's for each aircraft by serial number. MWO printout sheets for every aircraft in the USARV fleet were distrubuted to the owning unit for completion.

(d) Each unit was required to conduct a 100% MWO inventory and inspection of its historical records and aircraft to insure continuity and accuracy of data recorded on the printout sheet and in the aircraft historical records.

(e) The 1st Aviation Brigade Aircraft Maintenance Assistance and Liaison Team visited each USARV unit to insure that proper procedures were being utilized in the performance of the 100% physical inspection of MWO application, the recording of required information on the historical records, the requisitioning of all MWO kits not applied or on hand, the reporting of MWO compliances after application, and the reporting of MWO's which were applied but previously not reported.

(f) Close monitorship by the Quality Assurance Branch of all requisitions for MWO kits, recording of all kit releases and shipments by unit and aircraft serial number, and MWO applications.

2. Avionics

a. Control of USARV Controlled Avionics Items

(1) OBSERVATION: Units within USARV having control of or access to USARV Controlled Avionics Items (UCAI) are failing to coordinate with the USARV Avionics Office for disposition of UCAI equipment. In the past, UCAI equipment had not been stringently controlled due to a lack of feeder information from units in the field.

(2) EVALUATION: Shipping and disposition instructions issued by this office have consistently cited a requirement for submission of shipping information, relocation information, etc., however, subordinate commands have not complied fully with these requirements. A listing of UCAI was disseminated to the field in January 1972, but explicit instructions on the control of these items were never fielded. Currently an updated UCAI equipment listing and an LOI outlining the procedures and responsibilities for the disposition and processing of UCAI equipment have been fielded. It is imperative that the 1st Aviation Brigade Avionics Office maintain stringent control of UCAI equipment to preclude loss of valuable assets within RVN.

(3) RECOMMENDATION: That all unit commanders comply with USARV LOI, published by the Brigade Avionics Office, dated 31 October 1972, subject: USARV Controlled Avionics Items, and insure that subordinate personnal adhere to the instructions outlined within the LOI.

(4) COMMAND ACTION: None.

AVBAGC
SUBJECT: Operational Report-Lessons Learned for Headquarters, 1st Aviation Brigade, Period Ending 31 October 1972, RCS CSFOR-65 (R3) (U)

b. Retrograde of Avionics Equipment by KAPP Facilities

(1) OBSERVATION: The 1st Aviation Brigade Avionics Office is being increasingly tasked by various commands in CONUS for information regarding shipment and/or status of various items of avionics equipment. Queries by this office to subordinate units requesting shipping information indicates that the majority of retrograded avionics equipment is improperly documented. Specific problem areas are the lack of TCMD numbers, mode of shipment, date of shipment, name of carrier, and the final destination.

(2) EVALUATION: Subordinate units have not followed instructions outlined in Keystone SOP's nor followed MILSTAMP procedures. Most information provided to this office has been of a "personal knowledge" nature and is not documented.

(3) RECOMMENDATION: That unit commanders and commanders having control of KAPP facilities adhere to MACV Handbook on MILSTAMP and the LOI on retrograde procedures for avionics equipment published by this office.

(4) COMMAND ACTION: None.

c. Requisitioning by Part Numbers and Non-AMDF FSN's

(1) OBSERVATION: Avionics repair parts are being ordered by part numbers and non-AMDF FSN's with proper editing by the Aviation Supply Activity (ASA). This procedure reveals that a major item is deadlined for these parts in excess of 45 days at the 142nd Transportation Company and 75 days elsewhere. The item is then evacuated and the next higher assembly or end item will be ordered after this lengthy time lapse.

(2) EVALUATION:

(a) Recent evaluation of units requisitioning avionics items/repair parts by part number/non-AMDF FSN's reveal that items are deadlined for days in excess to those prescribed in AR 710-2 based on priority. Once the items have been evacuated due to time criteria of awaiting parts, a requisition is submitted for the next higher assembly/end-item and requisition for the part is cancelled. This is creating an undue time delay in repairing/replacement of avionics items.

(b) Several studies at USAECOM, as revealed by NICP Field Office Technical Representatives, demonstrate that on part number requisitions delivery will be substantially in excess of 75 days and delivery of non-AMDF FSN requisitions will exceed 45 days.

(c) The 1st Avn Bde, ASA, as part of their editing procedures, use the consolidated MCRL which changes almost all convertible part numbers to FSN's. Many of the FSN's from the MCRL's are not in the AMDF.

AVBAGC
SUBJECT: Operational Report-Lessons Learned for Headquarters, 1st Aviation Brigade, Period Ending 31 October 1970, RCS CSFOR-65 (R3) (U)

(3) RECOMMENDATIONS: That the Aviation Supply Activity, 1st Avn Bde, determine items that are requisitioned by part number or a non-AMDF FSN, and advise the unit to return the item to the applicable depot and requisition the next higher assembly or end-item as a replacement which can be identified easily by AMDF FSN.

(4) COMMAND ACTION: None.

3. Armament Systems

a. Unserviceable Armament Components

(1) OBSERVATION: It has become common practice to requisition replacements for unservicable components including those which could and should be repaired and returned to the user. This practice has resulted in large quantities of repairable components accumulating in conexs and other "hiding" places.

(2) EVALUATION: Repair parts and components which have a recover ability code of "R" or "S" are items which are repairable at DS or GS level. These unservicable components should be directly exchanged with the DX activity or, if not on the DX list, the item should be job ordered to the maintenance shop for repair; repair will be accomplished at the lowest level of maintenance required to restore the item to serviceable condition. A new "R" or "S" coded component should be requisitioned from supply only when all of the following conditions are met:

(a) The item is not available through the DX activity.
(b) The estimated time required to repair the item will not satisfy the required delivery date.
(c) Supply action will satisfy the required delivery date.

When "R" or "S" components are requested from a forward supply point, a like unservicable item or justifying document (such as a closed-out DA Form 2407 showing the item was salvaged) must accompany the request. Unserviceable items thus collected will be job ordered by the forward supply point to the supporting armament maintenance shop. Only those components which are unrepairable at DS/GS level will be evacuated to CONUS Depots. Such items will be evacuated directly to the USAASA at Saigon for further shipment to CONUS. If a high backlog of unservicable components develops, the 1st Avn Bde Armament Officer will be notified so that proper action will be taken.

(3) RECOMMENDATION: Direct support unit commanders will insure that supported units and the forward supply point and DS/GS armament maintenance shops are aware of, and follow, proper procedures for repair or replacement of recoverable components.

(4) COMMAND ACTION: None.

AVBAGC
SUBJECT: Operational Report-Lessons Learned for Headquarters, 1st Aviation Brigade, Period Ending 31 October 1972, RCS CSFOR-65 (R3) (U)

b. M-28A1 Armament Subsystem Retrograde

(1) OBSERVATION: M-28A1 armament subsystems retrograded to CONUS on AH-1G helicopters continue to be missing component parts without proper documentation.

(2) EVALUATION: When a M-28A1 subsystem is turned in to a direct support unit (DSU) from the using unit, it is first inspected by a unit appointed technical inspector. All items listed on the DA Form 2408-17 which are record (0), or are numbered less than quantity required, in column eight, will require an entry on the reverse side of the form with a reference in column "e" (on face of form) to the entry on the reverse. The entry will include the work order number of the DA Form 2408-7 processing the "Short" item to supply or maintenance, or the DA Form 2765-1 number, processed as, "02 NORS", AOE, Advice code 2C (fill or kill). Loose items which cannot be placed on or in the aircraft (7.62 machine gun and 40mm grenade launcher), but which must be shipped separate, will be recorded as follows:

(a) The package or crate and DD Form 1348-1 will be clearly marked "Equipment for Aircraft Serial No._____."
(b) A remark to indicate separate shipment will be entered on DA Form 2408-17 for each appropriate item of property. Turn-in credit will not be given to the losing unit by the DSU until all of the above requirements have been met.

(3) RECOMMENDATION: That all appointed technical inspectors be sufficiently briefed on turn-in and retrograde procedures as established by the 1st Avn Bde and USAWECOM. All DSU commanders should insure that TM-38-750 are available for review and that each technical inspector is thoroughly familiar with the proper use of DA Form 2408-17. The 1st Aviation Brigade Armament Officer will be notified of any recurring or critical problems related to the retrograde of M-28A1 armament subsystems.

(4) COMMAND ACTION: None.

4. Division Logistics System and ASA

a. Implementation of the Division Logistics Systems (DLOGS)

(1) OBSERVATION: The drawdown of US Army aviation units in RVN necessitated a restructuring of the Aviation Supply Support Organization.

(2) EVALUATION:

(a) The existing supply support organization consisted of an inventory control center (USA Aviation Materiel Management Center) with one depot, supporting field Direct Support Supply Activities (DSSA's). The AMMC, was tasked with the primary policing responsibilities of the RVN Aviation Supply System in addition to the traditional inventory management functions.

AVBAGC
SUBJECT: Operational Report-Lessons Learned for Headquarters, 1st Aviation Brigade, Period Ending 31 October 1972, RCS CSFOR-65 (R3) (U)

With the DSSA's performing stock record accounting on the NCR-500 system, the managers of AMMC lacked visibility of the DSSA's assets.

(b) In February 1972, a careful examination was made of future aviation supply requirements. Plans had been formulated to establish an organization with a similar mission and organization to the AMMC in an off-shore location to serve the entire Pacific Theater. This new organization, the Theater Aviation Material Management Center (TAMMC), would eventually replace AMMC, necessitating an off-shore requisitioning capability by the DSSA's.

(c) Extreme personnel turbulence during the drawdown caused a critical shortage in NCR-500 operators and managers. With a residual force, consisting of 4 DSSA's (1 in each Military Region), a large number of qualified operators were required. Adequate assets were not available.

(d) A search was made for a suitable solution. The following characteristics were the primary points of consideration:

((1)) Capability to utilize centralized management of assets.

((2)) Computer hardward capable of supporting the intensive management required by aviation.

((3)) Software that had already been developed and field tested.

((4)) A system that could be implemented with a minimum of training.

((5)) Local available hardware.

((6)) Economy of operation and support.

(e) To have the capability of a centralized management, consideration was given to pulling 4 NCR-500 systems into a single location and consolidating operations. The proposal did not afford adequate management capability.

(f) Other systems were considered but not accepted, usually because of the long software development lead time or anticipated delays in training, obtaining hardward, etc. The Division Logistics System was considered and found to be the most desirable solution, staffing and evaluation was conducted by USARV, MACV, USAEPAC, Computer Systems Command (CSC) and Department of the Army. Final approval was granted on 6 May 1972.

(g) Preparation for implementation had already been started. CSC had met with representatives from USARV. Special NCR-500 and Spectra 70/45 programs were developed for conversion of existing records to DLOGS. Purification of the DSSA's was initiated. By 4 June, a Conversion Team composed of CSC representatives from Fort Lee, Virginia, and USARPAC were in RVN. Classes for operating personnel were conducted and Military Regions III and IV were

placed under the new system after customer classes were conducted. The first routine cycle was started on 13 June. By 1 July, the remaining MR I and MR II were brought into the DLOGS UNIVAC 1005 system.

(h) A Central Direct Support Supply Activities was established in the other military regions, which were converted to Forward Supply Points. Such a structure gave centralized asset management, lateral search capability from a single location, uniformity of operating procedures, back-up stocks in-country, and greatly reduced requirements for technically skilled personnel.

(i) After four months of operation, a look at the newly instituted system reveals it is doing more than originally expected. An average of 6 routine processing cycles a week has been maintained. 52 to 80 thousand transactions per month are being processed. An average of 25,000 unit requests per month are processed with an ASL of 16,500 lines. Supply Performance exceeds USARV and the Department of the Army standards.

(j) Several problems have been noted. The high volume of NORS requests cannot be accommodated in the time frame required by the existing software. Off-line processing is being done. Machine processing of the UNIVAC 1005 (card oriented) is slow and processing is very complicated with numerous operator steps. Program logic is not available to the managers of the systems. Analysis of output reports is difficult, because of the vagueness of content derivation.

(3) RECOMMENDATIONS: It is evident that the DLOGS has been successful in its application in RVN. Updating the hardware to a tape system would greatly reduce many of the problems. Centralized Stock Record Accounting should be considered in all future supply systems.

(4) COMMAND ACTION: Problems that have become evident have been solved by system deviation or alteration. No DLOGS software has been changed or "fixed" to accommodated requirements.

b. Utilization of NHA Contractor Personnel

(1) OBSERVATION: During the initial conversion and implementation of DLOGS, it was noted that the utilization of civilians under the supervision of one or two military personnel could significantly decrease personnel turnover within the DLOGS Data Center and effectively reduce military personnel requirements. Personnel to operate the UNIVAC 1005 and associated PCM equipment can be provided by NHA under the terms of their contract.

(2) Utilization of 7 NHA contract personnel to operate the UNIVAC 1005 card processor and associated PCM equipment to run the DA Standard Division Logistics System enabled the DLOGS Data Center to eliminate the requirement for 8 military EAM operators. Although the contract with NHA is

only for one year, experience shows that the majority of these personnel work in a given location for more than a year, thereby significantly reducing personnel turbulance.

(3) RECOMMENDATIONS: None.
(4) COMMAND ACTION: None.

c. Utilization of Local National Employees

(1) OBSERVATION: Vietnamese employees who have worked with US Military Data Processing Personnel for 1-2 years could be used under the supervision of one or two military personnel to run the USARPAC Standard Supply System (3S), thereby significantly decreasing personnel turbulance and effectively reducing military personnel requirements.

(2) EVALUATIONS: Utilization of Vietnamese Local National personnel to operate the Spectra 70/45 computer to run the USARPAC Standard Supply System enabled the Data Processing Division to eliminate the requirement for military computer operators entirely. Turnover of Vietnamese personnel is low and wages for 12 Spectra 70 computer operators amount to only $1,000 monthly.

(3) RECOMMENDATIONS: None.
(4) COMMAND ACTION: None.

d. 365 AIMI Requisition Objective for VNAF

(1) OBSERVATION: VNAF requisitioned a 365 day Requisition Objective (RO) of repair parts to support their UH-1 and CH-47 aircraft. Due to the criticality of Aircraft Intensively Managed Items (AIMI), these were not originally included in the requirement, but were never-the-less required.

(2) EVALUATION: At the 2nd Quarter FY73 AIMI Conference held at USAAVSCOM, St. Louis, Missouri, it was decided that USARPAC would provide, from its assets, part of the overall requirement. The balance would be provided by USAAVSCOM. Stockage positions of these items have been made and reported to USARPAC. Items reported by AMMC will be transfered to VNAF. The balance will be sent directly to VNAF rather than through AMMC, the current routing for VNAF repair parts.

(3) RECOMMENDATIONS: None.
(4) COMMAND ACTION: None.

5. Miscellaneous.

a. Retrograde Site Shortage

(1) OBSERVATION: As military assets in the Republic of Vietnam are reduced, problems have developed in the available operable retrograde facilities.

AVBAGC
SUBJECT: Operational Report-Lessons Learned for Headquarters, 1st Aviation Brigade, Period Ending 31 October 1972, RCS CSFOR-65 (R3) (U)

(2) EVALUATION: The principal areas for retrograde operations are presently Da Nang, Nha Trang, and Saigon. Each of these areas has limiting factors which affect its suitability. Da Nang has presented problems is that loading fixed wing aircraft for surface shipment has required helicopter sling load transport due to the various roadway limitations. As troop levels are reduced, security of the equipment in the port area is also more difficult. This is also noticed since security precludes landing C5A aircraft in the Da Nang area. Nha Trang has similar problems to Da Nang except that there are no usable port facilities and retrograde movement must be via truck to Cam Ranh Bay. An alternative to this is air shipment from Nha Trang. The Saigon area presents several distinct problems. First, the only port area is Newport which requires movement through central Saigon for delivery from Tan Son Nhut to the port area. It has neither water nor electrical power at the loading sites. The port area is quite congested and could not readily accommodate large scale aircraft retrograde. Air movement presents a similar space problem since ramp space is at a premium and unoccupied work areas are limited. There are also security problems for ships travelling along the Saigon River.

(3) RECOMMENDATION: That personnel involved in movement planning for a combat theater consider all contigency plans for future movement and rollup operations prior to deactivating a facility.

(4) COMMAND ACTION: At the present time it appears that negotiations will have to be conducted in order to reopen either the Cam Ranh Bay or Vung Tau port facilities if large quantities of aircraft and associated cargo are to be moved expeditiously at some future time.

b. Integration of the Inventory Control and Movements Section, Aircraft Systems Branch, G-4, 1st Aviation Brigade

(1) OBSERVATION: Prior to the September 1972 integration of the 34th General Support Group (GSG) and the 1st Aviation Brigade, similar operations of inventory control and movements operations resulted in duplicated reporting procedures; extended lag time in information exchanges, and slow response to fast moving changes in strength and unit drawdown operations.

(2) EVALUATION: The integration of the Inventory Control and Movements Section in the Aircraft Systems Branch, G-4, 1st Avn Bde, resulted in the elimination of duplicate reporting procedures; consolidation of inventory control activities; and the controlled, orderly flow of retrograde aircraft. The streamlined organization in the Aircraft Systems Branch effectively establishes speedier coordination and response to command requirements.

(3) RECOMMENDATIONS: That any future aviation requirements of such magnitude as experienced in the Vietnam involvement be filled through the utilization of a responsive organization such as currently exists in the 1st Aviation Brigade, G-4.

(4) COMMAND ACTION: None.

AVBAGC
SUBJECT: Operational Report-Lessons Learned for Headquarters, 1st Aviation Brigade, Period Ending 31 October 1972, RCS CSFOR-65 (R3) (U)

c. Project 981 was Completed on 3 September 1972.

(1) OBSERVATION: At the outset of Project 981, the transfer of aircraft to VNAF, extreme difficulty was encountered due to a lack of qualified VNAF technical inspectors and test pilots to accept the aircraft.

(2) EVALUATION: The lack of qualified VNAF technical inspectors and test pilots made transfer of aircraft complicated and difficult. Currently each military region has qualified VNAF technical inspectors and test pilots which accelerated the transfer operations and facilitated a high degree of quality control.

(3) RECOMMENDATION: That planning for future operations involving transfer of aircraft include a transitional/instructional phase to allow training of qualified technical inspectors and test pilots for receiving agencies.

(4) COMMAND ACTION: None.

d. Project Enhance

(1) OBSERVATION: Difficulties encountered in Project 981 carried over to Project Enhance. Based on experience gained from Project 981, qualified technical inspectors and test pilots were identified in each military region.

(2) EVALUATION: Project Enhance was a valuable training vehicle in identifying problem areas when involved in a transfer of aircraft between two National Military Forces. The identification and use of qualified technical inspectors and test pilots aided in expediting the transfer of aircraft.

(3) RECOMMENDATION: That continued emphasis be placed on timely action, extensive coordination and proper indoctrination of participants.

(4) COMMAND ACTION: None.

G. Communications - None

H. Material - None

I. Other - None

Classified by CG 1st Avn Bde, APO SF 963[illegible] CG
SUBJECT TO GENERAL DECLASSIFICATION
SCHEDULE OF EXECUTIVE ORDER 11652
AUTOMATICALLY DOWNGRADED AT TWO YEAR INTERVAL
DECLASSIFIED ON 31 DEC 1978

JACK V. MACKMULL
Brigadier General, USA
Commander

AVHDO-O (undated) 1st Ind
SUBJECT: Operational Report-Lessons Learned for Headquarters, 1st Aviation Brigade, Period Ending 31 October 1972, RCS CSFOR-65(R3)(U)

Headquarters, USARV/MACV Support Command, APO San Francisco 96375

1 DEC 1972

TO: Commander-in-Chief, United States Army, Pacific, ATTN: GPOP-FD, APO San Francisco 96558

This headquarters has reviewed the subject Operational Report-Lessons Learned, and concurs with the basic report.

FOR THE COMMANDER:

PETER H. RODDA
1LT, AGC
Assistant Adjutant General

GPOP-FD (undtd) 2d Ind (U)
SUBJECT: Operational Report-Lessons Learned, HQ 1st Aviation Brigade, Period Ending 31 October 1972, RCS CSFOR-65 (R3) (U)

HQ, US Army, Pacific, APO San Francisco 96558 23 JAN 1973

TO: HQDA (DAFD-ZA) WASH DC 20310

This headquarters concurs in subject report as indorsed.

FOR THE COMMANDER IN CHIEF:

Daniel L. Ledda

DANIEL L. LEDDA
Colonel, AGC
Adjutant General

UNCLASSIFIED
Security Classification

CONFIDENTIAL

DOCUMENT CONTROL DATA - R & D

(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)

1. ORIGINATING ACTIVITY (Corporate author) HQ DA DAMO-ODU, Washington, D.C. 20310	2a. REPORT SECURITY CLASSIFICATION CONFIDENTIAL 2b. GROUP

3. REPORT TITLE

Operational Report - Lessons Learned for Headquarters, 1st Aviation Brigade, Period Ending 31 October 1972

4. DESCRIPTIVE NOTES (Type of report and inclusive dates)

Operational Report - Lessons Learned Report, 31 October 1972

5. AUTHOR(S) (First name, middle initial, last name)

BG Jack V. Mackmull

6. REPORT DATE 7 January 1974	7a. TOTAL NO. OF PAGES 35	7b. NO. OF REFS
8a. CONTRACT OR GRANT NO. b. PROJECT NO. c. N/A d.	9a. ORIGINATOR'S REPORT NUMBER(S) 722015 9b. OTHER REPORT NO(S) (Any other numbers that may be assigned this report:)	

10 DISTRIBUTION STATEMENT

11. SUPPLEMENTARY NOTES N/A	12. SPONSORING MILITARY ACTIVITY HQ DA, DAMO-ODU, Washington, D.C. 20310

13. ABSTRACT

CONFIDENTIAL

DD FORM 1 NOV 68 1473

UNCLASSIFIED
Security Classification

(This page is unclassified)